AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated hereafter (where underlining "_"

denotes additions and strikethrough "-" denotes deletions).

Claims:

1.   (Previously Presented) A method for dynamic bin allocation, the method

comprising:

obtaining link performance data based on a plurality of test transmissions

between two network elements, wherein the plurality of test transmissions

comprises an upstream transmission, a downstream transmission, and a full-

duplex transmission, the plurality of test transmissions performed in every

channel of a discrete multi-tone (DMT) communications system and each

performed at a maximum transmission power;

determining a desired transmission scheme for the discrete multi-tone

communications system, wherein each channel of the discrete multi-tone

communications system is designated a transmission mode based on the link

performance data, wherein the link performance data comprises at least one of a

data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio

and the transmission mode is selected from an upstream mode, a downstream

mode, and a full-duplex mode; and

assigning the desired transmission scheme to a connection between the

two network elements in the discrete multi-tone communications system.

2.   (Cancelled)

3.   (Cancelled)

4.   (Previously Presented) The method according to claim 1, wherein

the link performance data are obtained for each of a plurality of

predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of

predetermined transmission schemes based on the link performance data.

5.   (Original) The method according to claim 4, wherein the test

transmissions are based on the plurality of predetermined transmission schemes.

6.   (Original) The method according to claim 1 further comprising

communicating the desired transmission scheme to at least one of the two

network elements and continue communications between the two network

elements based on the desired transmission scheme.

7.   (Cancelled)

8.   (Original) The method according to claim 1, wherein the plurality of

frequency ranges are defined based on an orthogonal frequency division

multiplexing (OFDM) technology.

9.   (Cancelled)

10.   (Cancelled)

11.   (Cancelled)

12.   (Previously Presented) The method according to claim 1, wherein the connection further comprises a digital subscriber line (DSL).

13.   (Previously Presented) A system for dynamic bin allocation, the system comprising a first network element and a second network element, wherein each of the first network element and the second network element comprises at least a processor module and a transceiver module that are coordinated to

obtain link performance data based on a plurality of test transmissions between the first network element and the second network element, wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, and a full-duplex transmission, the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system and each performed at a maximum transmission power;

determine a desired transmission scheme for the discrete multi-tone communications system, wherein each channel of the discrete multi-tone communications system is designated a transmission mode based on the link performance data, wherein the link performance data comprises at least one of a

data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio

and the transmission mode is selected from an upstream mode, a downstream

mode, and a full-duplex mode; and

     assign the desired transmission scheme to a connection between the

two network elements in the discrete multi-tone communications system.

14.   (Cancelled)

15.   (Previously Presented) The system according to claim 13, wherein

     the link performance data are obtained for each of a plurality of

predetermined transmission schemes; and

     the desired transmission scheme is selected from the plurality of

predetermined transmission schemes based on the link performance data.

16.   (Previously Presented) A system for dynamic bin allocation, the system

comprising:

means for obtaining link performance data based on a plurality of test

transmissions between two network elements, wherein the plurality of test

transmissions comprises an upstream transmission, a downstream transmission,

and a full-duplex transmission, the plurality of test transmissions performed in

every channel of a discrete multi-tone (DMT) communications system and each

performed at a maximum transmission power;

means for determining a desired transmission scheme for the discrete

multi-tone communications system, wherein each channel of the discrete multi-

tone communications system is designated a transmission mode based on the

link performance data, wherein the link performance data comprises at least one

of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise

ratio and the transmission mode is selected from an upstream mode, a

downstream mode, and a full-duplex mode; and

means for assigning the desired transmission scheme to a connection

between the two network elements in the discrete multi-tone communications

system.

17.   (Cancelled)

18.   (Previously Presented) The system according to claim 16, wherein

the link performance data are obtained for each of a plurality of

predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of

predetermined transmission schemes based at least on the link performance

data.

19.   (Previously Presented) A computer readable medium having code for

causing a processor to perform dynamic bin allocation, the computer readable

medium comprising:

code adapted to obtain link performance data based on a plurality of test

transmissions between the first network element and the second network

element, wherein the plurality of test transmissions comprises an upstream

transmission, a downstream transmission, and a full-duplex transmission, the

plurality of test transmissions performed in every channel of a discrete multi-tone

(DMT) communications system and each performed at a maximum transmission

power;

code adapted to determine a desired transmission scheme for the discrete

multi-tone communications system, wherein each channel of the discrete multi-

tone communications system is designated a transmission mode based on the

link performance data, wherein the link performance data comprises at least one

of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise

ratio and the transmission mode is selected from an upstream mode, a

downstream mode, and a full-duplex mode; and

code adapted to assign the desired transmission scheme to a connection

between the two network elements in the discrete multi-tone communications

system.

20. (Cancelled)

21. (Previously Presented) The computer readable medium according to

claim 19, wherein

the link performance data are obtained for each of a plurality of

predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of

predetermined transmission schemes based on the link performance data.